

• COLORADO RIVER •  
**AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT

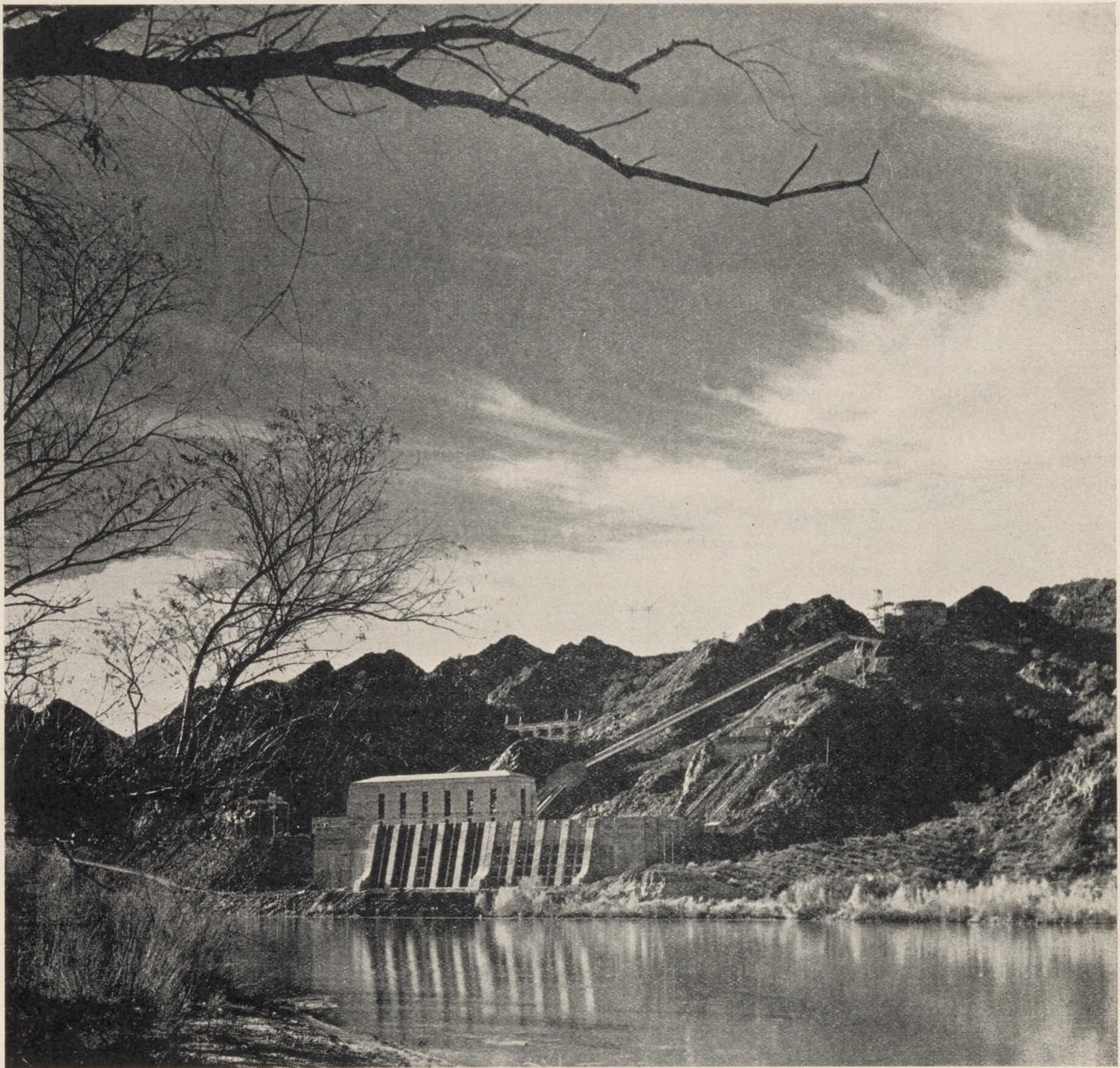


OF SOUTHERN CALIFORNIA

Vol. V

MARCH 25, 1938

No. 6



**THE INTAKE PUMPING PLANT**

Water in the Parker Reservoir, soon to be flooded, will submerge the lower part of the structure which was photographed from the Arizona side of the Colorado River.



# COLORADO RIVER AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

306 WEST THIRD ST.  
LOS ANGELES, CALIFORNIA

*Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.*

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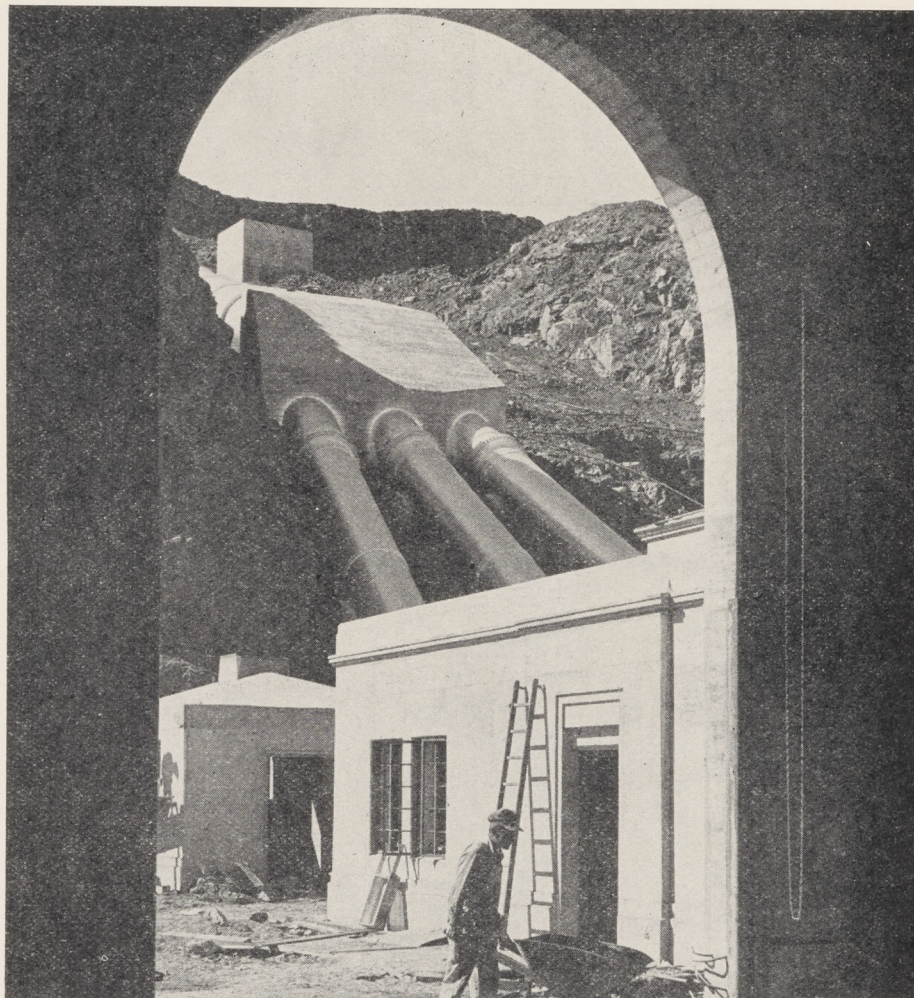
## Main Aqueduct Work Moves Into Home Stretch

Resembling the skyline of a city, the Copper Basin dam was approximately 65 per cent completed on March 20. The highest block in the structure, at the north abutment, was 192 feet above the foundation and was within 18 feet of the crest of the dam. The lowest block, at the center of the dam, was 97 feet above the foundation. With the other blocks at varying heights between these extremes, the dam presents a spectacular appearance in the deep, narrow canyon in which it is located.

Along with the Copper Basin dam, construction work on other features of the main aqueduct is moving into the home stretch. All five of the giant 50-foot-square spillway gates have been installed at Parker Dam and final riveting is under way. These huge gates, which, with their appurtenant works, weigh approximately 200 tons each, will be so perfectly counterbalanced that a small electric motor of less than five horsepower will lift each gate. Concrete in the main dam has reached the crest along all points, and work has been started on the construction of the roadway across the gate openings. Flooding of the reservoir back of the dam is expected to be started in April.

Contract work on the Intake and Gene pumping plants has reached the "final clean-up" stage, and force account crews are working at both plants on the installation of pumps and motors. Down at the Iron Mountain plant most of the mechanical assembly of the pumping equipment has been completed and work is under way on the landscaping of the grounds around the building. The first electric motor for the Eagle Mountain plant was received at Rice on March 17. So large that five freight cars were required to haul its various parts across the country, the electrical giant

(Continued on Page 6)



The delivery line of the Intake lift, as seen from inside the main doorway of the pumping plant.

## - DIRECTORY -

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PUMPING PLANTS  
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Iron Mt.....B. H. Martin  
Eagle Mt. and Hayfield.....R. C. Booth

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### (Distribution Tunnels)

Monrovia Tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; E. M. Penn, Concrete Supt.; Monrovia Tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., W. N. Evans, Supt.

### (Canal, Siphon, Conduit)

Schedules Nos. 14, 15 and 16,

Thompson - Starrett Co., Inc., Rodney Smith, Gen. Supt.; V. H. Wiese, Engineer.

Schedules Nos. 18, 19 and 20, J. F. Shea Co., Inc., Gilbert J. Shea, Gen. Mgr.; H. F. Rennebohm, Supt.

### (Distribution Pipe Line)

Schedules 6P and 7P, J. F. Shea Co., Inc., Gilbert J. Shea, Gen. Mgr.; Ed H. Shea, Gen. Supt.

Schedules 9P, 10P, 11P, United Concrete Pipe Corp., John Huber, Plant Supt.; Roy Richards, Construction Supt.

Schedules 8C, 9C, 12C, Basich Bros.; Dick Noble, Supt. Schedules 21SC, 22SC, 23SC, J. F. Shea Co., Gilbert J. Shea, Supt.

### (Dams)

Cajalco dam, The Griffith Co., Franz Fohl, Gen. Supt. Parker Dam, J. F. Shea Co., Frank Crowe, Gen. Supt., H. P. Bunker, Constr. Eng., U.S.B.R. Gene Wash dam, Copper Basin dam, J. F. Shea Co., Frank Crowe, Gen. Supt.

### (Pumping Plants)

Intake and Gene Winston Bros. and Crowell, R. A. Crowell, Supt.; F. T. Hillman, Engr. Eagle Mountain, L. E. Dixon Co., J. H. Larkin, Supt. Hayfield, Dixon and Case, Crawford Strohacker, Supt.





A party of well known construction men inspect the Lawrence adit of the San Jacinto tunnel. Left to right are: B. C. Leadbetter, general superintendent of the tunnel; Gilbert J. Shea; John Austin, superintendent at the adit; Julian Hinds, assistant chief engineer of the M.W.D.; Frank Crowe, general superintendent of the Shea Co.; and Thaddeus Merriman, consulting engineer for the M.W.D. and for the Board of Water Works and Supply of the City of New York.

## Safety Cooperation

By T. W. OSGOOD,  
Safety Engineer

The safety messages brought in many forms to aqueduct employees represent over five years of thought and effort on the part of the Board of Directors and staff of the Metropolitan Water District toward the elimination of accidents. These messages are based on actual experiences and they are specific in pointing out how accidents can be avoided. This information has exerted a strong influence on the marked downward trend of accidents on the aqueduct construction as a whole.

We urge that all employees carry the thought and practice of Safety into their homes and upon the highways as well as in their daily work for, strange as it may seem, more people are being killed and injured in home and highway accidents than in industry. Then, too, it is our firm belief that the wife, the mother—even the children—can be of real help in keeping their loved ones alert to accident possibilities.

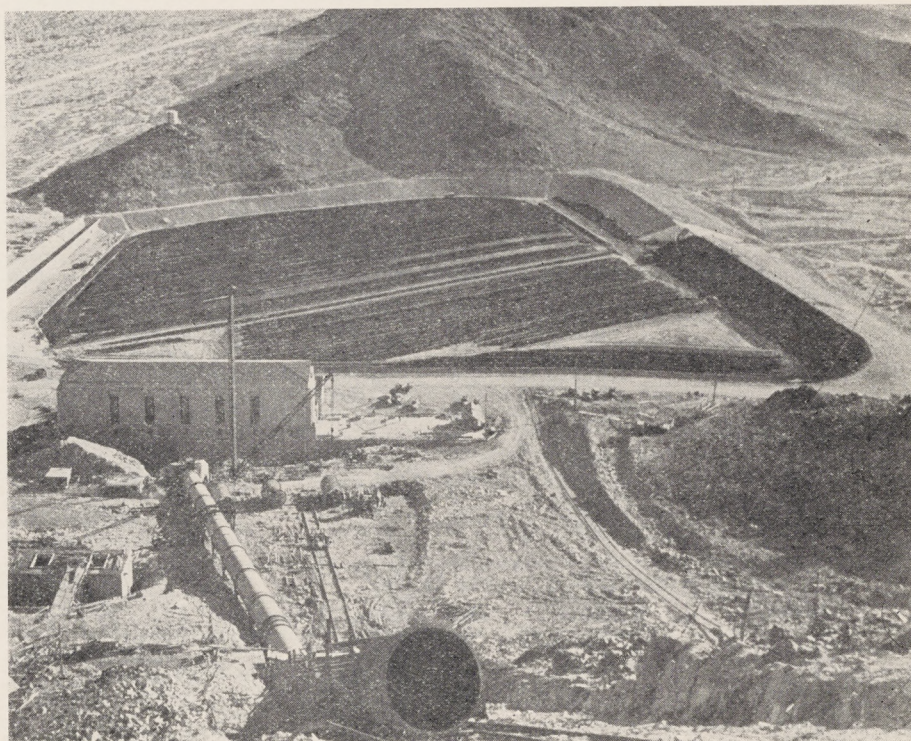
One of the most discouraging phases of accident prevention is the accuracy with which the number and type of accidents can be forecast, yet the utter impossibility of being able to tell to whom

and when they will occur. The cause of practically every accident that has occurred (Continued on Page 8)

## Decreased Water Flow Reported At Potrero Heading

Presenting the unusual sight of having the back of the drill jumbo smothered under a deluge of water while the drills at the front were working against a comparatively dry face, Potrero heading No. 3 (east toward Lawrence adit) was being worked as a full-face operation on March 23. Water at the face had dropped from 15,000 gallons per minute to 200 g.p.m. and the rock was a medium hard granite which required no support. As a contrast to the face itself, the water in the preceding 35 feet of the heading was flowing at the rate of 12,000 g.p.m. Total water flow at the West Portal of the San Jacinto tunnel, however, has shown a marked decrease from the peak recorded in the middle of February. Good progress is being made on the widening of the tunnel between headings 1 and 2, the plug between which was holed through on March 5. On March 23, less than 85 feet remained to be widened in this section which had been penetrated by a top pilot drift 146 feet long. On that date there remained 8,334 feet to be penetrated between Potrero and Lawrence.

Both the Junction, and the Midway pumping stations are now in operation at the Lawrence adit.



A view of the forebay, pumping plant, and delivery line, taken from the top of the Eagle Mountain pump lift.



# CONSTRUCTION

## TUNNELS

February 16 to March 15, 1938

### TUNNEL EXCAVATION (MILES)

	Completed	Remaining
Aqueduct	89.53	2.58
Distribution	16.20	0
Total	105.73	2.58

### TUNNEL LINING (MILES)

	Completed	Remaining
Aqueduct	85.32	6.79
Distribution	15.69	0.46
Total	101.01	7.25

### AQUEDUCT

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET					
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	SAN JACINTO	(68,843)	(336)	(2.7)	(903)	(55,207)	(13,636)		(8)	(28.3)	*(226)	(32,986)	(35,857)
	Cabazon Shaft to East Portal	8,880		Completed		8,880	0	{ Arch	0	0	0	8,484	396
	Cabazon to Lawrence	26,809	84	6.0	501	21,127	5,222	{ Invert	0	0	0	8,484	396
	Lawrence to Cabazon		84	2.6	217	460		{ Arch	0	0	0	6,973	19,836
	Lawrence to Potrero		84	0.7	59	335		{ Invert	0	0	0	6,972	19,837
	Potrero to Lawrence	17,672	84	1.5	126	8,923	8,414	{ Arch	8	35.3	282	2,386	15,286
	Potrero Shaft to West Portal	15,482		Completed		15,482	0	{ Invert	0	0	0	2,811	14,861
	Lawrence Adit	5,664		Completed		5,664	0	{ Arch	0	0	0	14,953	529
	Cabazon Pioneer			Suspended		7,274		{ Invert	0	0	0	15,482	0
	Potrero Pioneer			Suspended		5,571							
TOTALS	Ft. Miles	68,843 (13.04)	336	2.7	903 (0.17)	55,207 (10.46)	13,636 (2.58)	Arch Invert	8 0	35.3 0	282 0	32,796 33,749	36,047 35,094

### DISTRIBUTION

WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868	Completed	7,868	0	Full Sec. Invert Arch	33	Completed	7,796	0	
	MONROVIA NO. 2 (From Jct.1)	940	Completed	940	0			Completed	856	0	
	MONROVIA NO. 3	(32,105)	Completed	(32,105)	(0)			* (1,581)	(29,627)	(2,468)	
	East from Adit	11,340		11,340	0			0	12,279		
	West from Adit From West Portal }			5,913 }				0	19,352	464	
		20,765		14,851 }	0			1,976	16,847	2,969	
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,133	Completed	8,133	0	Full Sec.	18	14.0	252	8,133	0
	SAN RAFAEL No.1 (From W.P.)	4,047	Completed	4,047	0			Completed	4,028	0	
	SAN RAFAEL No. 2 (From E.P.)	5,669	Completed	5,669	0			Completed	5,661	0	
	TOTALS	Ft. Miles	58,762 (11.13)		58,762 (11.13)	0 0	Full Section	51	35.9	1,833 (0.34)	56,101 (10.62)

\*Invert considered to equal 0.2 and arch 0.8 of completed section.

## Miscellaneous Construction

February 27 to March 12, 1938

### AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	117,225	0	117,225	100	23,777	100	23,692	99	1,832	2.0	1,815.9	99
	Gene Plant	177,107	0	177,107	100	23,791	0	23,791	100	2,866	0	2,866.0	100
WOOD AND BEVANDA	Iron Mt. Plant	354,909	0	354,909	100	22,942	0	22,942	100	1,796	0	1,795.7	100
L. E. DIXON CO.	Eagle Plant	285,057	0	285,057	100	27,811	5	27,781	99	2,285	6.3	2,283.7	99
L. E. Dixon & Case Const. Co.	Hayfield Plant	352,994	0	351,343	99	40,946	902	33,356	81	3,743	80.4	2,764.4	74
	TOTALS	1,287,292	0	1,285,641		139,267	1,007	131,562		12,522	88.7	11,525.7	

### PARKER RESERVOIR—SIX COMPANIES, INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,363 Ft.	0	3,363	100
Cofferdams—Excav.	227,582 C.Y.	0	227,582	100
Cofferdams—Fill	464,890 C.Y.	0	464,890	100
Outlet Works—Excav.	220,000 C.Y.	0	207,176	94
Outlet Works—Concrete	5,000 C.Y.	70	3,974	79
Dam—Excavation	1,508,200 C.Y.	0	1,508,105	100
Dam—Concrete	297,900 C.Y.	2,374	282,421	95
Power House—Excav.	58,000 C.Y.	0	56,700	98
Power House—Concrete	14,000 C.Y.	833	14,240	99

### CAJALCO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Outlet App. Channel—Exc.	201,160 C.Y.	0	201,160	100
Outlet Tower—Concrete	3,250 C.Y.	0	3,250	100
Dam & Spillway—Exc.	701,725 C.Y.	0	701,725	100
Dam—Fill	3,135,560 C.Y.	0	3,135,560	100
Dam & Spillway—Concrete	27,025 C.Y.	0	27,025	100
Dike—Excavation	13,950 C.Y.	0	13,950	100
Dike—Fill	3,878,680 C.Y.	0	3,878,680	100
Dike—Concrete	44,165 C.Y.	0	44,165	100

Work Completed February 11, 1938.

### GENE WASH RESERVOIR—J. F. SHEA CO., INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Dam—Excavation	7,500	0	7,500	100
Dam—Concrete	14,339 C.Y.	8	14,206	99
Spillway—Excavation	4,762 C.Y.	0	4,762	100
Spillway—Concrete	4,729 C.Y.	0	4,729	100
Dike—Excavation	4,600 C.Y.	0	1,840	46
Dike—Fill	7,800 C.Y.	3,400	7,400	95
Dike—Concrete	1,200 C.Y.	0	200	17

### COPPER BASIN RESERVOIR—J. F. SHEA CO., INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Dam—Excavation	8,700 C.Y.	0	8,700	100
Dam—Concrete	16,275 C.Y.	3,529	8,394	52
Spillway—Excavation	8,000 C.Y.	700	8,000	100
Spillway—Concrete	1,000 C.Y.			
Outlet Works—Excavation	Lump Sum	0	31%	31
Gate House Superstructure				
Clearing Reservoir Site	427 Ac.	0	333	78



# ION PROGRESS

## CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	145.55	0.06
Concrete	144.28	0.28
Back Fill	79.36	1.48

## CANAL, CONDUIT, SIPHON & PIPE LINES

February 27 to March 12, 1938

## DISTRIBUTION PIPE LINE (MILES)

	Completed	Remaining
Excavation	46.47	17.22
Concrete	46.33	17.36
Back Fill	46.13	17.56

### AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
14	THOMPSON-STARRETT CO.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0
15		Conduit and Siphons	35,849	0	35,849	0	0	35,849	0	0	35,849	0
16		Conduit and Siphons	19,346	0	19,346	0	416	19,003	343	2,197	18,227	1,119
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	0	27,537	0	0	27,537	0	0	27,327	210
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,105	0	36,814	291	79	36,746	359	0	32,419	4,686
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	M. W. D.—FORCE ACCT.	Siphons	752	0	705	47	0	0	752	0	0	752
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,877	0	0	1,877	0	0	1,748	50
4		Siphon (Copper Basin)	450	0	450	0	0	450	0	0	0	0
	TOTALS		173,900	0	173,562	338	495	172,446	1,454	2,197	166,554	6,065

### DISTRIBUTION PIPE LINES

6-P	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,294	0	27,294	0	0	27,294	0	0	27,294	0
7-P			30,044	0	30,044	0	0	30,044	0	0	30,044	0
9-P	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	8,697	0	8,388	309	0	8,388	309	0	8,388	309
10-P			10,517	0	10,517	0	0	10,517	0	0	10,517	0
11-P			4,105	0	4,105	0	0	4,105	0	0	4,105	0
10-9C-12C	BASICH BROTHERS	Cast-in-Place Conc. Pipe	1,656	0	864	792	0	673	983	0	480	1,176
21SC	J. F. SHEA CO., Inc.	Welded Steel Pipe	28,930	0	0	28,930	0	0	28,930	0	0	28,930
22SC			28,310	0	0	28,310	0	0	28,310	0	0	28,310
23SC			34,470	300	1,885	32,585	89	1,341	33,129	435	470	34,000
TOTALS			174,023	300	83,097	90,926	89	82,362	91,661	435	81,298	92,725

## COMPLETED FEATURES

### TUNNELS

	CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed
AQUEDUCT	MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35
	WEST CONSTRUCTION CO.	Whitewater Nos. 1 & 2	1.94	7-18-33	4-15-35
	SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35
	HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35
	J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35
	HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36
	DIXON & BENT BROS.	W. Eagle—West Portion	2.02	9-8-33	3-12-36
	DRAVO CONTRACTING CO.	Valverde	7.20	6-7-33	10-18-36
	WALSH CONSTRUCTION CO.	Colorado River	1.04	3-2-34	1-29-36
	WALSH CONSTRUCTION CO.	Copper Basin Nos. 1 & 2	2.32	10-4-33	2-20-36
	WALSH CONSTRUCTION CO.	Whipple Mountain	6.11	8-25-33	1-26-37
	UTAH CONSTRUCTION CO.	Iron Mt.—West Portion	3.07	5-15-33	10-23-36
	WINSTON BROS. CO.	Iron Mt.—East Portion	4.48	8-9-33	10-30-36
	METRO. WATER DIST.	1000 Palms No. 1	3.04	1-25-33	1-7-37
	" " "	1000 Palms No. 2	0.73	2-24-33	12-19-35
	" " "	Wide Canyon No. 1	2.71	3-31-33	2-11-37
	" " "	Wide Canyon No. 2	0.16	3-24-33	2-12-37
	" " "	Seven Palms	3.17	4-27-33	2-2-37
	" " "	Long Canyon	2.90	3-6-34	12-31-36
	" " "	Blind Canyon	1.29	3-22-34	12-3-36
	" " "	Morongo No. 1	1.08	4-21-34	1-20-37
	" " "	Morongo No. 2	0.36	12-29-34	1-5-37
	BRODERICK & GORDON	West Eagle Mt.—E. Portion	3.00	2-8-34	5-6-37
	WINSTON BROS.	Coxcomb	3.37	9-15-33	4-26-37
	METRO. WATER DIST.	East Coachella	18.30	1-25-33	5-8-37
	BRODERICK & GORDON	East Eagle Mt.	1.79	6-8-34	7-23-37
TOTALS			79.07		
DISTRIBUTION	J. F. SHEA CO., INC.	Sierra Madre	1.27	9-1-35	10-31-36
	DIXON, BENT BROS. & JOHNSON	Pasadena Extension	1.05	10-5-35	11-24-36
	DIXON, BENT BROS. & JOHNSON	Pasadena	2.30	2-11-35	4-29-37
	GRIFFITH COMPANY	Cajalco Outlet	0.45	11-12-35	2-11-38
TOTALS			5.07		

### CANAL, CONDUIT, SIPHON, AND PIPE LINES

	CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
AQUEDUCT	UNITED CONCRETE PIPE CORP.	Little Morongo Siphon	0.13	2-27-34	8-20-34
	METRO. WATER DIS.	Fan Hill Conduit and Siphon	0.32	10-21-33	11-19-34
	MORRISON-KNUDSEN CO.	Sch. No. 18-J, Big Morongo and San Andreas Siphon	1.86	2-12-35	9-16-36
	GRIFFITH COMPANY	Sch. No. 20-C, 21, 22, 23 & 23-A	12.79	1-5-35	10-13-36
	JAHN & BRESSI CONST. CO.	Sch. No. 5, Canal and Siphons	10.15	12-18-34	11-17-36
	JAHN & BRESSI CONST. CO.	Sch. No. 4, Canal and Siphons	10.08	6-6-35	3-18-37
	UTAH CONSTRUCTION CO.	Sch. No. 9, Canal, Conduit & Sip.	8.97	12-12-34	5-15-37
	BARRETT-HILP & MACCO CORP.	Sch. No. 2, 3, 7, Canal, Con. & Sip.	18.71	12-3-34	5-25-37
	METRO. WATER DIST.	Sch. No. 17, Conduit and Siphons	4.16	9-9-35	6-15-37
	AQUEDUCT CONST. CO	Sch. No. 1, 10, 11, 13 Canal, Con. & S.	26.99	1-24-35	6-24-37
	WOOD & BEVANDA	Sch. No. 6, 8, Canal & Siphons	12.28	11-27-34	7-28-37
	THREE COMPANIES, INC.	Sch. No. 12, Conduit & Siphons	6.24	1-8-35	11-6-37
TOTALS			112.68		
DISTRIBUTION	UNITED CONCRETE PIPE CORP.	Sch. No. 8P, Precast Concrete Pipe	4.65	2-21-36	3-20-37
	WESTERN PIPE & STEEL CO.	Sch. No. 2S, 2B, Welded Steel Pipe	10.33	4-8-36	11-24-37
	AMER. CONC. & STEEL PIPE CO.	Sch. No. 1, 3, 4, 5, Precast Conc. Pipe	15.75	2-20-36	12-23-37
TOTALS			30.73		



## WHO ARE "THE ANCIENT ORDER OF AQUEDUCT BILLY GOATS"?

Inquisitive visitors from the Los Angeles office who have toured the aqueduct recently have returned with reports of a rumored organization known as "The Ancient Order of Aqueduct Billy Goats." Membership in this honorable group is apparently limited to a select few and its secret rites have been carefully guarded, with the result that the inquisitive office "stiffs" have a great yearning to enter the mystic portals of the AOABG. So far, all that is known of the membership is that it consists of a number of those sunburned and hairy-eared engineers and SI's who have been on the job since the days of the preliminary surveys. Information about this mysterious group will be appreciated.

## MOTION PICTURES ENTERTAIN EMPLOYEES ON MAIN AQUEDUCT

Providing entertainment for employees on the main aqueduct, the District has established "movie night" at the M.W. D. construction camps between Banning and the Colorado River. These pictures are free to aqueduct workers and their families and all employees at both force account and contract jobs are cordially invited to attend the showings. The present schedule for the sound movies is as follows: Monday night, Cabazon and Potrero; Tuesday nights, Iron Mountain; Wednesday nights, Division 1; Thursday nights, Eagle Mountain.

The program for the week ending March 26 is typical, and includes George Arliss in "East Meets West."

## SAFETY FLAG AWARDS San Jacinto Tunnel

The safety award for the month of February for excavation operations was given to Lawrence Adit, while East Portal had the best safety record during the month for tunnel concreting operations.

## AQUEDUCT PROGRESS

(Continued from Page 2)

weighs 222,000 pounds. Manufactured for the District by the Westinghouse Electric & Mfg. Co., this, and the other motors for both the Eagle Mountain and Hayfield plants, is rated at 12,500 horsepower.

The only open work remaining to be completed consists of the Iron Ledge and Thermal Canyon siphons being built by Thompson-Starrett, and the highway and railroad crossings south of Cabazon, which are being constructed by the Shea Company. All other conduits, siphons, and canals are now completed.

# MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in March, covering the work done in February.)

## Legal Division

Payment for Interim Certificate No. 78, representing bonds in the amount of \$1,800,000 sold to the R.F.C., was made on February 9.

## Miscellaneous Activities Division

On the afternoon of February 26, a thirty minute radio program devoted to the District and the aqueduct was broadcast over the Columbia Broadcasting System with 118 stations throughout the United States and Canada participating. The radio broadcast network was made available through the courtesy of the Columbia Broadcasting System and Station KNX.

During February, 563 employment applications were filed with the District's Labor Employment Office.

## Field Engineering and Construction

*Safety Engineering*—See safety awards, column one, this page.

*Operation of Utilities*—During the period January 16 to February 16, power used amounted to 4,916,065 kw-hr. There were 12,264 long distance telephone calls handled, and 1,407,500 cubic feet of water was delivered.

*Salvage Operations*—Removal of the buildings from the Coachella camps by the various purchasers was continued during the month.

*Aqueduct Construction*—See progress tables pages 4 and 5. Placing of concrete in the main structure at Parker Dam was 96 per cent complete at the end of the month. Erection of the five 50-foot-square steel spillway gates was continued and all structural members had been assembled by February 28. Cooling of the dam was discontinued on February 22.

Main heading excavation in the San Jacinto tunnel was advanced 0.21 miles during the month, making a total of 10.37 miles excavated and leaving 2.67 miles to be penetrated.

## Civil Engineering Division

*Design*—The principal design work during the month was the completion of drawings for the distribution system headworks at the north end of the Cajalco outlet tunnel, and for the discharge valves and fittings required in connection therewith.

## Distribution Division

*Office and Field Engineering*—Electrolysis tests were made on the steel pipe of upper feeder Schedule 2B from Arlington to Fontana.

*Field Construction*—All work on Contract 198 with the Griffith Company for the construction of the Cajalco dam and dike was completed on February 9, except the removal of camp and construction plant. Work on this contract was started August 30, 1935, and was completed in 29½ months. Earthfill embankment amounted to 6,950,000 cubic yards, and there was 30,500 cu. yds. of tunnel excavation, and 990,000 cu. yds. of open cut excavation.

The first steel pipe on the Palos Verdes feeder was laid on February 8 at 98th Street and Wadsworth Avenue.

## Electrical Engineering

*Office Engineering*—Inspection was continued at the various plants where equipment is being constructed. Specifications were issued for pressure and sump tanks for main pump discharge valves and for other pumping plant equipment.

*Field Construction*—See progress tables pages 4 and 5. The contractor on the Gene pumping plant completed all backfill and was engaged in general clean-up by the end of the month. At the Iron Mountain plant the assembly of all three pumping units was completed. Erection of the equipment in the switch house was 50 per cent completed. District force account crews were working at all five pumping plants during the month on the installation of equipment.

## Personnel Division

The net turnover for all positions for January was 3.77 per cent, which is the lowest turnover to date by District forces.

## Purchasing Division

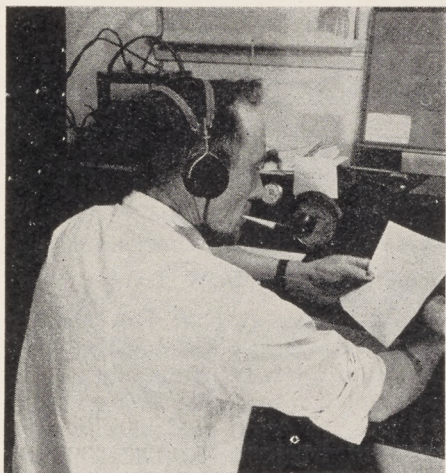
Purchase orders during the month numbered 1,489 and amounted to approximately \$137,900. Carload forwardings totaled 309.

## Accounting and Costkeeping

The total cost of the work accomplished to February 28, was \$159,887,670.

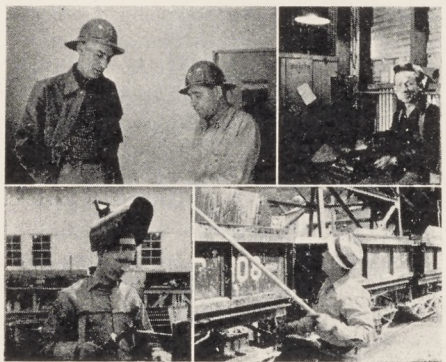


# NEWS FROM FIELD AND OFFICE



Gus McGinnis, shown at his short-wave radio set with which communication was established between the Field and the L. A. office during the recent floods. Gus operated from Division 1 headquarters.

Mr. Morton Macartney, Chief of the Self-Liquidating Division of the R.F.C., and R. J. Cummins, consulting engineer for the federal corporation, arrived at Division 1 headquarters on March 21 to make an inspection tour of the aqueduct.



A traffic jam caused by the arrival of the L. A. Fire Dept. at the corner of 3rd and Broadway was cleared up when it was found that smoke pouring out of the windows of the M.W.D. offices was from cigars and not from a fire in the District's headquarters. The smoke screen was laid down in honor of the arrival on March 16, of Stephen Hinds Waldron, weight 9 pounds. The young man's grandfather is Julian Hinds, Assistant Chief Engineer of the District. Last reports indicated that the mother (Mr. Hind's daughter) and son were doing fine, but the grandpa was still a bit shaky.

## Aqueduct Temperatures

March 1 to March 15, 1938

	Max.	Min.
Div. 1 .....	79°	37°
Div. 2 .....	78°	42°
Div. 3 .....	73°	42°
Div. 5 .....	69°	36°

Aqueducters at Iron Mountain report that they have a hard time making visitors realize the size of the pumps and other equipment at the pumping plant. Vern Davis has solved the problem by his unique self-conducted tour by which he escorts visitors around the job. The high spot of this tour is to take the visitors inside one of the pumps. The scroll cases around the impellers of the pumps are large enough to easily accommodate at least four visitors at one time. Said visitors get the "thrill of a lifetime" when they realize that they are actually inside the water pumps. Vern reports that they are considering setting up their famous ping-pong table inside one of the pumps to save space above ground.

\* \* \*

Robert W. Doyle, formerly an inspector on the Division 4 Field Engineering force, has been transferred in the same capacity to Division 1.

\* \* \*

Mr. Waldo Bowman, one of the editors of the Engineering-News Record inspected construction work on the main aqueduct and distribution system on March 20 and 21. Mr. Bowman is from the New York office of the well known engineering publication.



The candid camera tours the Lawrence adit. Going from left to right, top to bottom, 1st, 2nd, and 3rd columns, the cameraman visited Supt. Austin and Malcom McKinley in the office; W. R. Jensen, who was busy eating lunch; Tom McCogan and his welding torch; "Scotty" Scott, who was barring down the muck bin; Chief Electrician Paul Huckfeldt. The camera looks down the adit, and at the bottom takes a picture of the pumping station; the swing-shift coming on the job; and the crew at work setting timber in the arch; under the direction of Shifter Frank Merrick.



W. S. Gould and Clarence Vendley, of the Electrical-Mechanical division, who operated their own short-wave stations at the Los Angeles end of the communications set-up established between the 2nd and 6th of March.

The Purchasing Division thought it had a charity case on its hands a few days ago—or at least a victim of the flood—when it received a requisition from one of the pumping plants calling for the repair of one damaged transient. After calling the Red Cross and other damaged transient repair organizations, Purchasing Agent Saul Joseph checked back with the Field and got them to compromise on the repair of one damaged transit.

\* \* \*

With 20 feet of water back of the Cajalco dam, the Cajalcoites have organized a Yacht Club and are sending invitations to Pacific Coast Yacht Clubs to participate in the forthcoming sailing races. Commodore Dick Ward and First Mate W. F. McCleary are in charge of events, although "Mac" is said to enjoy fishing more than boating.





## Contract Awarded For Headworks

At its meeting on March 25, the Board of Directors awarded a contract to the Contracting Engineers' Company of Los Angeles for the construction of the headworks for the Distribution System. The contractor's bid, which was low, was for \$158,980. District items are estimated at \$118,270, bringing the total cost of the work to \$277,250.

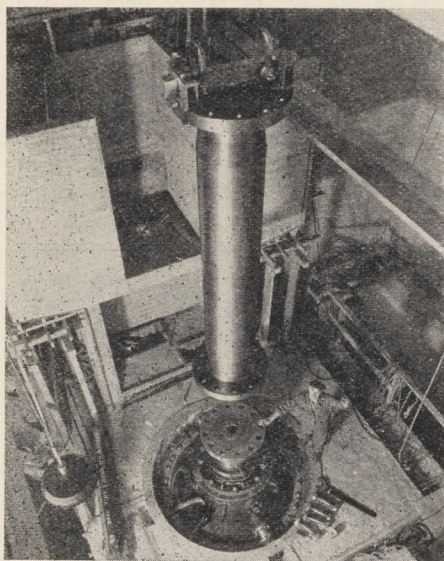
## SAFETY COOPERATION

(Continued from Page 3)

curred, or that will be caused in the future, is pointed out in one or more of these messages. Yet we know that many of these same accidents are apt to recur.

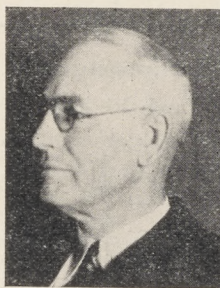
The reason is that everyone may not take these messages seriously and consequently will not profit from them. Until all of us face this problem squarely and accept a just share of personal responsibility, accidents will continue in a more or less regular cycle. On the other hand, when we do make up our minds that accidents can and will be stopped, then, and only then, they will be stopped.

No scheme, no system, no plan can ever be devised that will produce the Safety results we all desire without your individual and collective help. With this help, whole-heartedly given, we can solve this great human problem, difficult as it may seem—but we must have your help. We are counting on YOU.

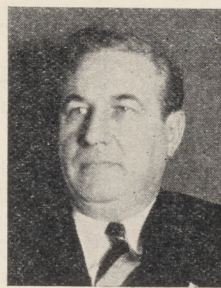


Lowering the drive shaft to one of the pumps in the Gene pumping plant. The big shaft is 20 inches in diameter.

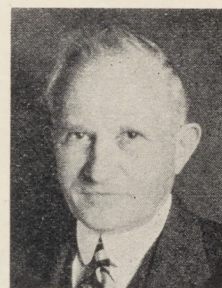
## Who's Who On the Aqueduct



William M. Cook



Otto J. Emme



D. W. Pontius

**WILLIAM M. COOK**  
*Member of the Board of Directors, Metropolitan Water District. Representative of Long Beach*

Born in Fredonia, Kansas, March 20, 1880 . . . Attended grammar and high schools in Los Angeles . . . Worked in the Union Bank of Savings in Los Angeles from 1899 to 1903 . . . Moved to Long Beach in 1903 and has made his residence there since . . . Was Chief Accountant for the Bank of Long Beach which by successive changes in names became the National Bank of Long Beach, the Security Trust and Savings Bank, and the Security-First National Bank . . . Was later Assistant Cashier, Cashier, and Vice-President until he resigned in 1923 . . . 1923-1935, was engaged in the Investment, Real Estate, Property Management, and Insurance business in Long Beach. From March, 1936, to date has been Secretary-Treasurer of Graham Brothers, Inc. . . . Has been a member of the Board of Directors of the Metropolitan Water District since January, 1933 . . . Is member of Organization, Highways, and Land Committees . . . Is married and has one daughter, who is now studying architecture at the University of Oregon . . . Hobby is trout fishing.

**OTTO J. EMME**  
*Member of the Board of Directors, Metropolitan Water District. Representative of Los Angeles*

Born at Topeka, Kansas, July 3, 1888 . . . Graduated from the University of Southern California in 1917 with degree of LL.B. . . . Was admitted to the Bar of California on July 23, 1914, and entered practice in Los Angeles . . . Later formed partnership with Leo M. Rosecrans under firm name of Rosecrans and Emme and is member of that Los Angeles firm at present time . . . Enlisted in Navy at time of World War and was commissioned as Ensign at close of war . . . Is member of State Bar of California, Los Angeles County Bar Association, Past Exalted Ruler of Los Angeles Lodge No. 99, B.P.O.E.; Past Commander of Victory Post No.

54 of American Legion; Past District Deputy Knights of Columbus; and member of Delta Chi fraternity . . . Is past member of State Legislature (1923-24), and was Associate Counsel for the Board of Medical Examiners of the State of California from 1924-1929 . . . Has been a member of the Board of Directors of the Metropolitan Water District since January, 1935 . . . Is member of Legal, Medical, and Claims Committees of Board.

**D. W. PONTIUS**  
*Controller of the Metropolitan Water District, and Member of Board of Directors Representing Los Angeles*

Born in Upper Sandusky, Ohio, March 24, 1869 . . . Attended Ada, Ohio, Normal School . . . Started his career as clerk in track supervisors office, Pennsylvania Railroad . . . Was successively with Northern Pacific Railroad, Union Pacific Railroad, and Southern Pacific Railroad as clerk, telegraph operator, station agent, train master, district freight and passenger agent, traffic manager . . . Was general manager of the San Diego and Arizona Railroad during completion of construction of that line, which was placed in service between San Diego and the East during the World War . . . Returned to Los Angeles as Vice-President and General Manager of the Pacific Electric Railroad in 1919 . . . Was made President of the Pacific Electric Railroad in 1929, and Chairman of the Board of Directors of that organization in 1937 . . . Was President of the Motor Transit Company in 1930, and is now Chairman of the Board of that company . . . Was Managing Director of the Los Angeles Motor Coach Company at time it was organized in 1923 . . . Has been member of Board of Directors of the Metropolitan Water District since January, 1933 . . . Is Controller, Member of Advisory Council, and Finance, Legal, Insurance, Bidding, San Jacinto Tunnel, Claims, and Boulder Dam Power Committees . . . Hobbies are music and raising grapefruit.